

What is claimed is:

1. A developing unit for developing a latent image formed on an image carrier with a developing liquid consisting of a carrier liquid and a developing substance, said developing unit comprising:

a developing roller including a roller portion and rotatable while carrying the developing liquid on said roller portion; and

voltage applying means for applying a voltage to said roller portion to thereby form an electric field for development between said roller portion and the image carrier, whereby the developing liquid deposited on said roller portion is transferred to a latent image formed on said image carrier;

wherein said roller portion has a volume resistivity ranging from $0 \Omega \cdot \text{cm}$ to $10^7 \Omega \cdot \text{cm}$.

2. A developing unit as claimed in claim 1, wherein said roller portion and the image carrier contacting each other form a nip therebetween, and wherein said roller portion has a hardness of 30° or below in JIS-A scale or 60° or below in Asker-C scale.

3. In a developing unit including a developing roller, which includes a roller portion contacting an image carrier and rotatable while carrying a developing liquid consisting of a carrier liquid and a developing substance

thereon, for developing a latent image formed on said image carrier by depositing said developing liquid on said latent image, wherein said roller portion has a ten-point mean surface roughness of 3 μm or less.

4. A developing device as claimed in claim 3, wherein said roller portion and said image carrier contacting each other forms a nip therebetween, and wherein said roller portion has a hardness of 30° or below in JIS-A scale or 60° or below in Asker-C scale.

5. An image forming apparatus comprising:
an image carrier for carrying a latent image thereon;
a developing unit for developing the latent image by depositing a developing liquid, which consists of a carrier liquid and a developing substance, on said latent image;

a developing roller including a roller portion and rotatable while carrying the developing liquid on said roller portion; and

voltage applying means for applying a voltage to said roller portion to thereby form an electric field for development between said roller portion and said image carrier, whereby the developing liquid is transferred from said roller portion to the latent image formed on said image carrier;

wherein said roller portion has a volume resistivity

ranging from 0 $\Omega\cdot\text{cm}$ to $10^7 \Omega\cdot\text{cm}$.

6. A developing unit as claimed in claim 5, wherein said roller portion and the image carrier contacting each other form a nip therebetween, and wherein said roller portion has a hardness of 30° or below in JIS-A scale or 60° or below in Asker-C scale.

7. A developing unit as claimed in claim 5, wherein said image carrier has a surface formed of a-Si.

8. An image forming apparatus comprising:
an image carrier for carrying a latent image thereon;
and

a developing unit including a developing roller, which includes a roller portion contacting an image carrier and rotatable while carrying a developing liquid consisting of a carrier liquid and a developing substance thereon, for developing a latent image formed on said image carrier by depositing said developing liquid on said latent image;

wherein said roller portion has a ten-point mean surface roughness of 3 μm or less.

9. A developing unit as claimed in claim 8, wherein said roller portion and the image carrier contacting each other form a nip therebetween, and wherein said roller portion has a hardness of 30° or below in JIS-A scale or 60° or below in Asker-C scale.

10. A developing unit as claimed in claim 8, wherein said image carrier has a surface formed of a-Si.

11. A developing unit for developing a latent image formed on an image carrier with a developing liquid consisting of a carrier liquid and a developing substance, said developing unit comprising:

a developing roller including a roller portion and configured to rotate while carrying the developing liquid on said roller portion; and

a voltage applying device configured to apply a voltage to said roller portion to thereby form an electric field for development between said roller portion and the image carrier, whereby the developing liquid deposited on said roller portion is transferred to a latent image formed on said image carrier;

wherein said roller portion has a volume resistivity ranging from $0 \Omega \cdot \text{cm}$ to $10^7 \Omega \cdot \text{cm}$.

12. A developing unit as claimed in claim 11, wherein said roller portion and the image carrier contacting each other form a nip therebetween, and wherein said roller portion has a hardness of 30° or below in JIS-A scale or 60° or below in Asker-C scale.

13. An image forming apparatus comprising:

an image carrier configured to carry a latent image thereon;

a developing unit configured to develop the latent image by depositing a developing liquid, which consists of a carrier liquid and a developing substance, on said latent image;

a developing roller including a roller portion and configured to rotate while carrying the developing liquid on said roller portion; and

a voltage applying device configured to apply a voltage to said roller portion to thereby form an electric field for development between said roller portion and said image carrier, whereby the developing liquid is transferred from said roller portion to the latent image formed on said image carrier;

wherein said roller portion has a volume resistivity ranging from $0 \Omega \cdot \text{cm}$ to $10^7 \Omega \cdot \text{cm}$.

14. A developing unit as claimed in claim 13, wherein said roller portion and the image carrier contacting each other form a nip therebetween, and wherein said roller portion has a hardness of 30° or below in JIS-A scale or 60° or below in Asker-C scale.

15. A developing unit as claimed in claim 13, wherein said image carrier has a surface formed of a-Si.